

# Joint C4ISR Decision Support Center

# C4I Support Plans (C4ISP) Overview Brief

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## Form SF298 Citation Data

Report Date ("DD MON YYYY") 01111999	Report Type N/A		Dates Covered (from to) ("DD MON YYYY")		
Title and Subtitle			Contract or Grant Number		
C4I Support Plans Overview B	rief		Program Element Number		
Authors			Project Number		
			Task Number		
			Work Unit Number		
Performing Organization Na Information Assurance Techno 3190 Fairview Park Drive Falls	logy Analysis Center (IA	ГАС)	Performing Organization Number(s)		
Sponsoring/Monitoring Agency Name(s) and Address(es)		(es)	Monitoring Agency Acronym		
			Monitoring Agency Report Number(s)		
<b>Distribution/Availability Stat</b> Approved for public release, di					
Supplementary Notes					
Abstract					
Subject Terms					
Document Classification unclassified			Classification of SF298 unclassified		
Classification of Abstract unclassified			Limitation of Abstract unlimited		
Number of Pages 19					

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 074-0188
searching existing data sources, gat comments regarding this burden estim Washington Headquarters Services, Di	thering and maintaining the data neede mate or any other aspect of this colle irectorate for Information Operations	d, and completing and reviewing ction of information, includin and Reports, 1215 Jefferson Da	including the time for reviewing instructions, g this collection of information. Send g suggestions for reducing this burden to vis Highway, Suite 1204, Arlington, VA 22202-
1. AGENCY USE ONLY (Leave	02, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503  AGENCY USE ONLY (Leave 2. REPORT DATE 3. REPORT TYPE AND DATES COV		
blank)	11/1/99	Briefing	
4. TITLE AND SUBTITLE C4I Support Plans Over	rview Prief	5.	FUNDING NUMBERS
CHI Support Frans Ove.	LVICW BITCI		
6. AUTHOR(S) Not provided			
			PERFORMING ORGANIZATION REPORT NUMBER
Information Assurance Technology Analysis Co (IATAC) 3190 Fairview Park Dr:			REFORT NORDER
Falls Church, VA 220		>	
Defense Technical Information Center DTIC-AI 8725 John J. Kingman I Suite 944 11. SUPPLEMENTARY NOTES	Road,		. SPONSORING / MONITORING AGENCY REPORT NUMBER
12a. DISTRIBUTION / AVAILAB	SILITY STATEMENT		12b. DISTRIBUTION CODE
			A
13. ABSTRACT (Maximum 200 W	ords)		L
C3ISR & Space Systems affordably implement:	, presents the C4ISP as	a systematic appr s and identify dep	endencies, shortfalls, and
14. SUBJECT TERMS			15. NUMBER OF PAGES
C4I			16. PRICE CODE
15 476277777	I 10 angreen	10 499797	
17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFIC	ABSTRACT

Unclassified

NSN 7540-01-280-5500

Unclassified

Unlimited

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. 239-18
298-102



# **Problem Statement**

### Given:

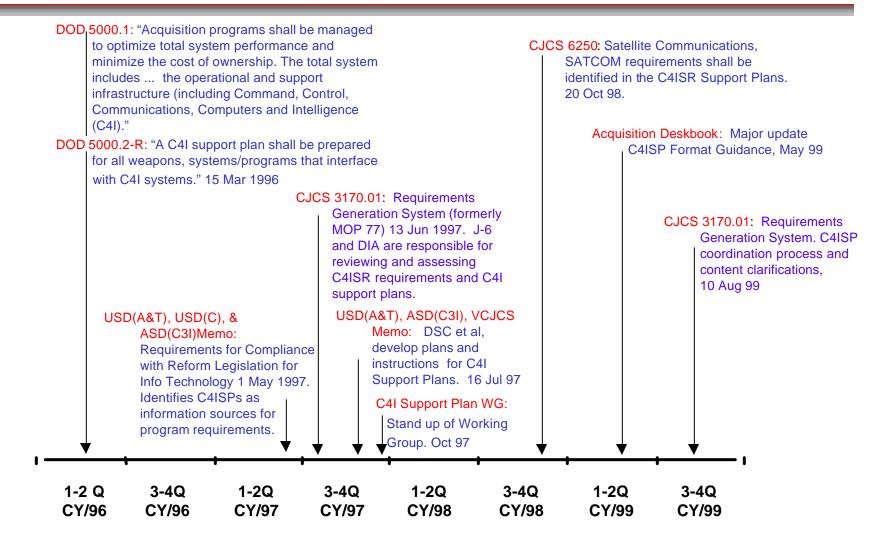
- The Joint Vision 2010 information superiority goal will require a robust, interoperable and reliable C4I system of systems architecture
- Systems will be more dependent than ever on each other to achieve information superiority
- Future military operations portend an increased demand on C4I support
- Current acquisition process must adjust

### **Problem:**

 A systematic approach is needed to credibly and affordably implement information capabilities and identify dependencies, shortfalls, and impact on C4I infrastructure early on in the acquisition process



# Background





# C4I Support Plan Goals

### **Program Offices:**

- <u>Identifies</u> <u>C4I system support needs</u> for weapons, systems/programs
- Identifies <u>dependencies</u> between systems
- Identifies <u>interface requirements</u> early-on in acquisition process
- Mechanism to identify, plan, and manage implementation issues related to C4I infrastructure requirements
- Enables trade analysis

### C4I Support Organizations (interfacing systems, service providers)

- Determine if system is <u>supportable</u>
- Ensure systems being developed have adequate and <u>sufficient C4I resources</u>
- Facilitate interoperability , integration & compatibility

### **Joint Staff**

- Assist in certification processes (interoperability & intelligence)
- Assess impact on C4I infrastructure

### **OSD**

- Assess compliance with standards, architectures, investment strategy
- Identify C4I Support deficiencies
- Assess & manage interoperability and integration efforts

### **ALL**

Raise & resolve issues



## **Game Plan**

- Establish a C4ISP working group to develop the process and set of procedures to assist in developing C4ISR Support Plans
- Develop an Action Plan
- Establish C4ISP coordination process
- Clarify existing C4ISP guidance
- Raise & resolve issues related to fielding systems with necessary C4I support
- Show immediate value



# C4ISP WG Primary Players

### **Organizations**

- OSD
  - ✓ OASD(C3I)
  - ✓ OUSD(A&T)
- · JS
  - **√** J2 (IRCO)
  - **√** J6
- Services
  - ✓ ARMY: DISC4
  - ✓ AF: SAF/AQI, XOR, AFCIC, 497th IG
  - **✓** NAVY: N6, SPAWAR

### Agencies

- ✓ DISA,JITC, JSC
- ✓ DIA
- ✓ NSA
- ✓ NIMA
- Other CAEs
  - . BMDO
  - · NRO

### **Functions**

- PSAs
- PM
  - √ JSF PMO

## Others as Appropriate



# Milestones

# MID-TERM (3-9 mon)

- Coordinate Action Plan with Services & Key Players
- review current instructions & processes
- -Propose and prepare updates
- -Prepare sufficiency checklist
- -Identify C3I resources and implement procedures
- -Brief Services/Agencies/PMs on process

-Establish C4ISP Helpdesk

- --C3I agreement on C4ISP COA
- Coordinate COA w/JS

NEAR-TERM (0-3 mon)

- Establish C4ISP working group
- Develop Action Plan

as of 9 Jan 1998

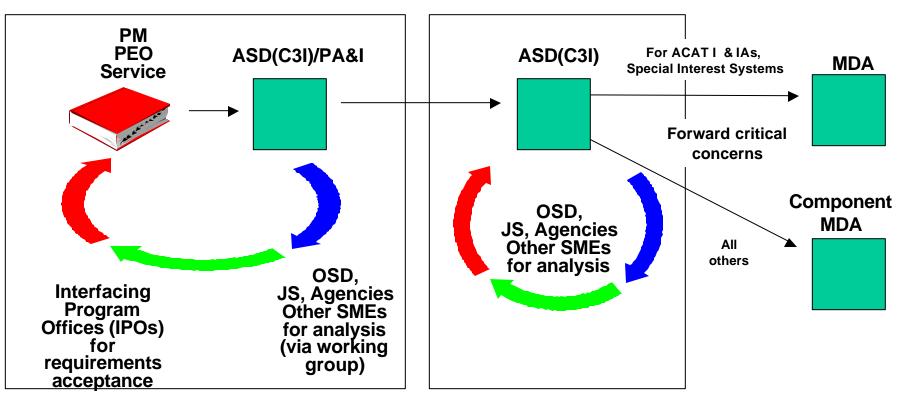
# LONG-TERM (9-18 mon)

- -Clarify Guidance
- -Coordinate and update DoD Regs and DOD and JS Instructions
- -Develop DSMC curriculum to institutionalize process





# C4I Support Plan Coordination CONOPs



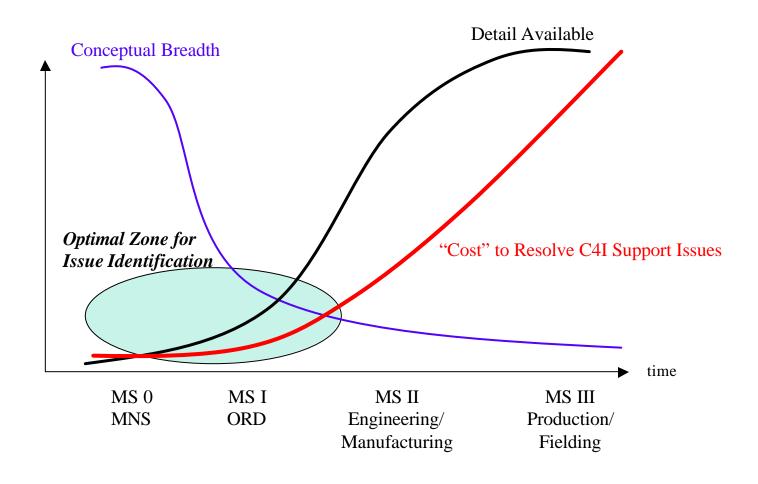
Integrated Product Team For Plan Development

Formal Milestone Coordination

(NLT 60 days prior to MS)

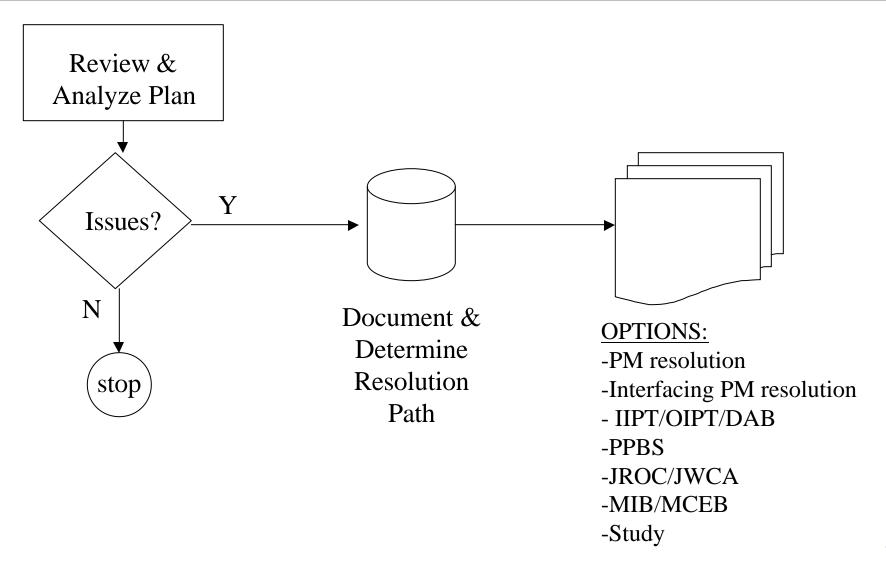


# Challenge





# Issue Resolution Process





# C4I Support Plan Contents

- Introduction:
  - High level system description, directory of related information to be exchanged
- System Description:
  - Detailed overview of the system, including all characteristics relevant to C4I support
- Operational Employment:
  - Defines employment concept, roles & missions, mission type, employment rate/requirements, operational architecture view, operational info exchange requirements, event trace timelines
- Derived C4I Support Requirements
  - Quantify operational requirements placed on supporting C4I systems
  - Define systems architecture view and system info exchange requirements
  - Identify C4I infrastructure necessary for T&E and training
- Potential C4I Support Shortfalls & Proposed Solutions
  - Operational employment, testing & training support shortfalls
  - Identify impact of shortfall on operations and propose solution
- Appendix (i.e. ITMRA requirements compliance)

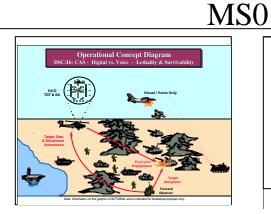
<sup>\*</sup> as per Acquisition Deskbook, dtd May 99

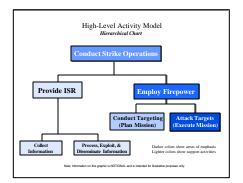


# C4I SP Architecture Framework Products

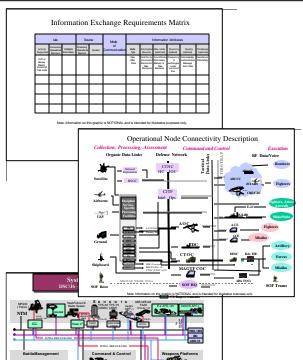
**MSII** 

Op Arch View

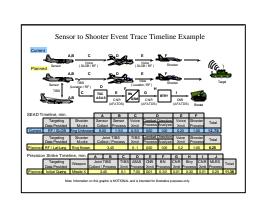




- Sys Arch View
- •Op Concept Diagram
- •High-level Activity Model



MS I



- •Event Trace Timeline
- •Tech Architecture Profile

**MSIII** 

- •Information Exchange Requirements
- •Op Node Connectivity Diagram
- •System interface Diagrams



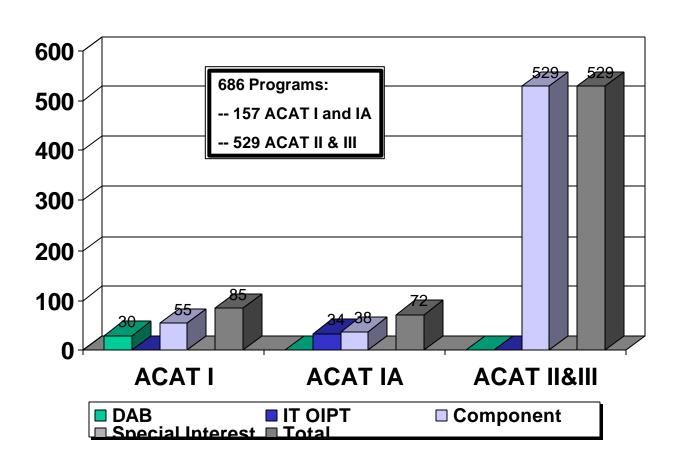
# C4ISP Potential Shortfalls Product

Task	C2	Comm	СМ	ISR Sensors	PED	Nav	Log
INGRESS							
Accurate navigation data							
Ability to pass data in flight							
Ability to receive threat updates in flight							
Ability to receive new tgt locn (prec. Coords)							



# **ACAT Distribution**

### 1997 Programs by Acquisition Category





# Milestones

- C4ISPs are "living documents"
- Updates prior to each milestone decision
- Update when program/system upgrades affect or impact C4I infrastructure

Milestone O: Approval to Conduct Concept Studies

1st Edition

Milestone I: Approval to Begin a New Acquisition Program

2nd Edition

Milestone II:
Approval to
Enter
Engineering &
Manufacturing
Development

**3rd Edition** 

Milestone III: Production or Fielding/ Deployment Approval

4th Edition

Upgrade

5th Edition

PM's submit NLT 60 days prior to Milestone

Decision 30 day approval process

PROPOSED

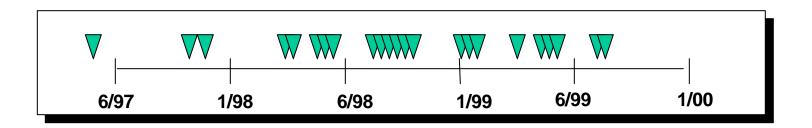
Service C4ISP office submits 30 days prior to decision point for upgrade



# C4ISPs Received

- . Force XXI Battle Command Brigade & Below . (FBCB2), dtd 8/99
- . F/A-18 (Strike Fighter), dtd 8/99
- Theater High Altitude Area Defense (THAAD), dtd 7/99
- F-22 Advanced Tactical Fighter, dtd 5/99
- . Battlefield Combat ID System (BCIS)dtd 5/99
- Theater Medical Information Program (TMIP) dtd 5/99
- . JSTARS Common Ground Station (CGS) dtd 4/99
- . Navy Theater Wide BMD dtd 2/99
- . Hard & Deeply Buried Target Defeat dtd 1/99
- . Advanced EHF MILSATCOM dtd 1/99
- . Army Tactical Missile System-BAT dtd 10/98

- Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T), dtd 10/98
- Maneuver Control System (MCS), dtd 8/98
- Joint Air to Surface Standoff Missile (JASSM),dtd 8/98
  - 21st Century Tactical Aviation Seabased Platform (CVX), dtd 5/98
- Joint Strike Fighter (JSF),dtd 3/98
- Joint Precision Approach and Landing System (JPALS), dtd 3/98
  - Joint Stand Off Weapon (JSOW)
  - Patriot System, dtd 5/97
    - Theater Missile Defense (TMD), 7/96





# Checks and Promising Tools

### **Analysis Needs**

- System of Systems Check. Can the proposed system be coherently integrated into the operational and systems architecture by mission area?
- Interoperability & Compliance Check. Is proposed system interoperable w/ interfacing systems? Is proposed system compliant w/ tech standards, ITMRA
- Information Mgmt/Delivery/Dissemination & <u>Sufficiency</u>. Are information timelines adequate? Is there sufficient information support & resources for this system?
- <u>Cross-Program Analysis</u>. Are interfacing programs in synchronization?
- <u>Info Security Check</u>. Are proposed information security solutions adequate?
- <u>Issue identification and resolution</u>. What C4I support issues exist and how can they be resolved?

### Other needs

- C4ISP Development
- On-line library & electronic doc coord

### **Promising Tools**



- Levels of Information Systems Interoperability(LISI)
- NETWARS
- PPBS tracker
- Issue Tracking DB
- Joint System Requirements Tracking Tool (JSRT2)
- Info Analysis Program



# OSD C41 Support Plan Points of Contact

### OASD(C3I) C4I Support Plans:

Mr. John Buchheister Program Analysis & Integration Directorate DASD C3I & Space

### **Working Group:**

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